



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

X.—*Narrative of an Expedition to the Andaman Islands in 1857.*

By F. J. MOUAT, Esq., M.D., F.R.G.S., &c.

Read, January 13, 1862.

THE Andaman Islands, lying in the Bay of Bengal, in 93° east longitude, and between the 18th and 14th degrees of north latitude, were first carefully surveyed by Lieutenant Archibald Blair, of the Indian Navy, in 1789 and the following year. His Survey Report has recently been published by the Government of India in the printed Selections from their Records. About the same time (1789-90) they were visited and examined by Lieutenant (afterwards Colonel) Colebrooke, Surveyor-General of India, who published an account of the islands in the 4th volume of the 'Asiatic Researches.' In addition to a general description of the islands, their physical character and inhabitants, his paper contained a brief vocabulary of the Andaman language, in which is comprised all that is yet known on that subject.

In 1789 formal possession was taken of the Andamans by the Indian Government, and a small penal colony was established, under the charge of Lieutenant Blair, at Port Cornwallis, near the southern extremity of the Great Andaman, on its eastern coast. For three years this colony was healthy and prosperous, when, in 1792, it was removed to a larger harbour nearly two degrees to the northward, on the eastern shore of the same island, in $13^{\circ} 28'$ N. lat. and $93^{\circ} 12'$ E. long. This harbour was also named Port Cornwallis, when the appellation of the original settlement was changed to Old Harbour. In its new position, the colony situated in Chatham Island was so continuously unhealthy that it was ultimately abandoned in 1796.

In 1795 the settlement was visited by Colonel Syme, who devoted a chapter to its description in the narrative of his embassy to Ava. Port Cornwallis was subsequently visited in 1814, and was afterwards selected as the rendezvous of the first expedition to Ava in 1824.

The first mention of the Andaman Islands is by two Mahomedan travellers, whose account is published in Pemberton's 'General Collection of Voyages and Travels.' In Hamilton's 'Account of the East Indies,' and in the Calcutta 'Monthly Register,' are brief references to the islands and their inhabitants.

Of late little further was heard of them than occasional notices of shipwrecks, which invariably represented the inhabitants as irclaimably savage, implacable, hostile, and inhospitable.

In 1840 the island was visited by Dr. Helfer for scientific purposes. This gentleman was killed by the savages very shortly after

his arrival there, in circumstances of which the exact particulars were never known.*

Subsequently representations were more than once addressed to the Government of India and to the Court of Directors of the late East India Company regarding the outrages committed by the savage inhabitants of the Andamans on shipwrecked mariners. The result of these representations was an intention again to examine the island, with a view to the selection of one or more harbours of refuge.

At this stage of the proceedings the great Sepoy mutiny of 1857 occurred, when it was determined to send a fresh expedition to examine the Andaman group of islands, "with a view to the selection of a site for the establishment of a penal settlement for the reception, in the first instance, of mutinous deserters and rebels sentenced to imprisonment in banishment," and eventually for the re-establishment of a more general convict settlement for felons sentenced to transportation from all parts of the British possessions in India.

Accordingly in November, 1857, a Committee was appointed by the Governor-General of India, for the purpose above mentioned. It consisted of myself, Dr. George Playfair of the Bengal Army, and Lieut. J. A. Heathcote of the Indian Navy. To Dr. Playfair were assigned the medical and scientific duties of the expedition; to Lieut. Heathcote all matters relating to hydrography; and to myself was entrusted the general charge and command of the expedition. The Committee submitted a combined Report of their labours, which was published in 1859 as the 25th number of the 'Selections from the Records of the Government of India,' edited by myself.

The present communication is derived from the Report in question and from the private notes made by me during the expedition, partly from my own observations and in part from the daily record written by Dr. Playfair and Lieut. Heathcote, and placed in my hands from day to day by the officers in question. To them I am so much indebted for facts and observations, carefully observed and accurately recorded, that I am anxious that the present Paper should be considered our joint contribution to the records of the Royal Geographical Society, while I am alone responsible for any errors and imperfections which it may contain.

The expedition left Calcutta on the 23rd of November, 1857,

* The widow of Dr. Helfer was the niece of Field-Marshal Baron Bülow. The facts of Dr. Helfer's death were these:—Accompanied by Madame Helfer, he landed, when a savage concealed behind a bush transfixed him with his spear. The lady, armed like her husband, drew a pistol from her girdle, and shot the murderer on the spot.

in the steam-frigate *Semiramis*, and proceeded to Moulmein, where the war-steamer *Pluto*, an iron vessel of very light draught, well adapted for navigation in shallow waters and among coral reefs, was placed at our disposal. A carefully selected European guard of twenty men from the crew of the frigate, with an officer, was told off by Capt. Campbell, of the Indian Navy, for the protection of surveying parties. Twelve Burmese convicts, with a native guard, well used to forest life, were also made over to us by Major Fytche, the Commissioner of the Tenasserim provinces, to assist in cutting a path through the jungle, in boring for water, and similar purposes. Without the aid of these men and of the crew of the *Pluto* we could have made no progress in our explorations, so dense and impenetrable did we find the vegetation everywhere. To mount the smallest hill it was necessary to cut a path, and we were never able to penetrate more than from 5 to 6 miles in a single day. There were no open spaces for camping, and, as we were without tents, all exploring parties returned on board at sunset. As the savages abounded everywhere—were silent, stealthy, and crafty in their movements—were concealed by the luxuriant vegetation—invariably evinced a determined spirit of hostility, and were well provided with the means of aggression, which they never omitted to employ—all parties engaged in the survey were carefully armed. Every precaution was taken to prevent surprise, and to hold open our communication with the steamer. The sanitary precautions taken were to mix a small quantity of quina in the coffee, issued at daybreak to the men, and to see that they were protected from the sun by suitable covering.

The east coast of the Great Andaman, from Port Cornwallis to the Cinque Islands, was first examined. Rutland Island was then explored, and every point of the west coast as far as North Reef Island was visited that afforded any prospect of containing the requisites for the establishment of a penal settlement. Incidentally the Andaman and Middle Straits were investigated, and a visit was paid to the volcano on Barren Island.

This magnificent, picturesque, and land-locked harbour was carefully explored. It was found to contain excellent anchorage-ground, sheltered from all weathers, with good holding, and could accommodate a very large fleet of vessels of every draught. It was surrounded by low hills, densely covered with vegetation to the water's edge, and abounded in shallow creeks, which were not explored. It afforded an abundant supply of fresh water, one of the rills yielding little if anything less than 500 tons' daily discharge of pure, wholesome, limpid water. It contained more than one bank of palatable oysters, and abounded in shell and other fish. On its shores were a few native huts, of which none of the inhabitants were seen.

The remains of the settlement on Chatham Island were disentangled from the dense vegetation, by which it was concealed, with extreme difficulty. Fragments of the brickwork were found in excellent preservation, but all other traces of habitation were effaced. A few cocoa-nut trees alone indicated the attempt to introduce economical plants not indigenous to the soil. According to Blair's survey, the sea must have encroached on the north-eastern end of Chatham Island some 40 or 50 feet.

On the south-western extremity of the same island was an extensive mud bay, uncovered at low tide, skirted by belts of mangrove, with low flat country on the opposite shore in the same direction. The only sea-surge that could reach the settlement was the north-east wind, which blows over a small portion of the northern aspect. To these causes—to the pestilential nature of the mud-banks when uncovered, and to the abundance of rank, reeking, decayed vegetation in every direction—the excessive unhealthiness of the early settlement was doubtless due.

The expedition next proceeded to Craggy Island, under the shelter of which it anchored for the purpose of exploring the Saddle Peak, the most elevated hill on the whole group. It is about 2400 feet in height, covered with vegetation to its summit, is of considerable extent, and its eastern aspect broken by densely-wooded ravines. Between the shore and Craggy Island was a dangerous reef, rich in shell-fish, which the natives were engaged in gathering at the time of our visit. We anchored at about 3 P.M. So sudden and unexpected was our appearance, that a party of women fishing on Craggy Island was cut off, and unable, from terror and agitation, to launch their canoe, which was drawn up on the beach. They immediately concealed themselves in the vegetation covering the small islet. The men on the reef exhibited frantic signs of hostility, notwithstanding our making every attempt to conciliate them. The canoe was scrupulously respected, and in it were placed looking-glasses, beads, and other articles of savage finery. The same course was pursued with the huts on the main land; but all efforts to establish friendly intercourse were rejected with violence. We had scarcely proceeded a few yards after landing before a flight of arrows was discharged at us. The aggression was repelled by a volley of musketry over the heads of our assailants.

All attempt to examine the peak was abandoned when it was found that the base of the hill was a considerable distance inland, and that it would occupy an amount of time that could not be spared from the main purpose of the expedition. The water-supply from the neighbouring hills was abundant, and the coast in the vicinity well peopled.

The coast from the Saddle to Andaman Strait was cursorily

examined. It was found to be hilly nearly to the water's edge, and to afford no good landing-place. There was scarcely any mangrove, and in one or two places tolerably deep caves were seen.

We steamed through Stewart's Strait and right round Sound Island, which is of an irregular quadrilateral shape, forming one side of a land-locked bay, accessible at all seasons to vessels of every class. The island consisted of ridges of high land, traversing it in all directions, and prolonged in spurs to the point of the bay indenting its margins. It was fringed with belts of mangrove and surrounded by coral reefs, with occasional fine sandy beaches.

Towards its southern end is a horseshoe-shaped harbour, nearly three quarters of a mile in depth, and rather more than half a mile in breadth. Its northern and eastern aspects are skirted by coral banks; but in the rest of its extent it has good anchorage-ground for large vessels.

The ridge of hilly ground surrounding this bay is about 120 feet in height, and furnished an extremely grand and repeated echo on the firing of the evening and morning guns.

The vegetation was much less dense and tangled than we found it elsewhere, probably due to a deficiency of water, which rendered it quite unfit for a convict settlement. A few natives were seen fishing, and the smoke of their fires rose in many directions. Fire was found concealed in the decayed trunks of some of the larger trees, and in various places branches were bent nearly to the ground by means of large stones attached by the tendrils of climbing plants. The object of this practice, which was found to prevail generally, was not ascertained.

The existence of a practicable passage from the east to the west coast of the Great Andaman, debouching at Interview Island, had been left undetermined by Blair. The *Pluto* was next anchored off the mouth of Andaman Strait, and a fast boat, with a strong picked crew, was sent to explore this strait and ascertain how far it was navigable. After pulling through a very tortuous passage for several hours, our progress was arrested by finding that at low tide the mud was exposed in the main channel, and we had very great difficulty in retracing our steps. The swamps and sunderbunds traversed for about a third of the breadth of the island in this place were extremely putrid and pestilential. Vegetation was extremely luxuriant, but confined to mangroves. There was no trace of habitation or of animal life in the dense swamps bordering the strait. The fact of the non-existence of a passage for any useful purpose was fully established.

The Expedition then steered south to the Andaman Archipelago, of which a portion only was examined; Blair's survey showing that the navigation in its vicinity was extremely difficult and dangerous, that it contained no harbours, and was unfitted for a convict settle-

ment. It was on the south-eastern aspect of the largest of the islands of the archipelago that the troop-ships *Briton* and *Runnymede*, with detachments of H. M.'s 50th and 80th Foot, were wrecked in November, 1844. All attempts made on that occasion to hold amicable intercourse with the natives failed.

We then proceeded to Barren Island, which was examined for a few hours. It now contains a considerable amount of vegetation, and from the south appears like a huge hill rising abruptly from the sea. On its north-western aspect is the only practicable opening, from which the cone of the existing volcano is visible. At the base of the cone was a considerable amount of black basalt, and at the landing-place a hot fresh spring was found, of which the exact temperature was not ascertained. From the steam evolved at low water, when a portion of the spring was exposed, it was inferred that the temperature was nearly, if not quite, that of boiling water. The cone was found to be covered with fine ashes, in some places of a light gray colour. It rose at an angle of 40° to a height of 975 feet, and from the truncated apex a small quantity of white smoke was seen to issue. The island is nearly circular, and about 2970 yards in diameter. The ascent was not particularly difficult, and in some places the ground was uncomfortably hot.

A photograph of the cone was taken from the most distant point practicable. No appearance of the sea having ever washed round the base of the cone was detected during our examination. We arrived at the conclusion that the amount of sulphur contained in the crater was not sufficient to repay the cost of working—a conclusion from which Dr. G. Von Liebig differed after a more detailed and careful examination, made four months after our visit. A detailed notice of the geological features of this singular volcano, by Drs. Playfair and G. Von Liebig, is appended to the 25th number of the printed 'Selections from the Records of the Government of India.'

The Expedition next visited Old Harbour, near the extremity of South Andaman, where the first convict settlement was placed in 1789. The original survey of Lieut. Blair was found to be accurate to the minutest particulars here and everywhere else that it was subjected to proof.

Scarcely a trace of the original settlement was found on Chatham Island, and on Ross Island, at the mouth of the harbour, the marks of former occupation were entirely effaced. There was everywhere an abundance of wood, water, and building materials: the rocks abounded in shell-fish, and the harbour with many varieties of edible fish; the soil seemed to be everywhere fertile. There was much less of mangrove and swampy ground than at Port Cornwallis, and on the whole it was found to afford the most promising site for a convict settlement that was discoverable on the Great Andaman.

Several villages were examined, and proofs were found scattered in every direction of its being a popular place of resort for the natives of the island. They avoided us as much as possible, fired at us when we approached near enough to any of their settlements, and resisted every attempt to form a close acquaintance with them.

The name of this harbour has been changed to Port Blair, in honour of the excellent and accurate hydrographer by whom it was first explored, and a new convict settlement has been formed there.

Rutland Island, a fine hilly island at the southern extremity of the Great Andaman, was next explored. It was found to be of considerable extent, well wooded, and abundantly supplied with fresh water. The dense forest covering its southern aspect exhibited marks of exposure to the full force of the south-west monsoon, the trees in many places being uprooted, and for a considerable extent beaten down by the force of the wind. Fragments of wrecks too small for identification were discovered, and it afforded evidence of being tolerably well peopled. The shores were somewhat difficult of access, and, except in Macpherson's Strait, which separates it from the southern division of the Great Andaman, it contains no secure harbour. The Cinque and Labyrinth Islands adjoining it were also visited: they presented no special features deserving remark. In some of them were small canes, containing the nests of the *Hirundo esculenta*, and all the reefs abounded in the *bêche-de-mer*. A larger number of birds were seen than were found farther to the north, many of them closely resembling the humming-bird.

The Expedition then proceeded northward to examine the west coast of the Great Andaman. The passage between the Labyrinth Islands was found to be difficult and dangerous, from the presence of banks of coral, on which account it seems to have been left unexplored by Blair. Nearly opposite to Port Blair an opening was indicated in the chart, which was found to lead to a new harbour of considerable extent, well sheltered, bordered by low hills covered with lofty trees, and containing an abundance of fresh water. Soundings were taken and observations made by Lieut. Heathcote to determine its exact position. Its proximity in a direct line to the westward of Port Blair—about 2 miles, from observation—affords a hope of its being practicable hereafter to open an overland communication between the east and west coasts, and thus considerably to improve the healthiness of the convict settlement by allowing both monsoons to blow across it. An attempt made by Dr. J. P. Walker, some months subsequent to our visit, to cut a path from Port Blair to the west coast, however, failed, from the extreme density of the vegetation and the intervention of an impracticable swamp. The exploring party in this case was surrounded

by savages during the whole of the attempt to open a communication. They did not venture upon any open act of hostility.

This harbour has been named Port Mouat by the Governor-General of India. The shores were lined by villages in several places, and canoes were found in every stage of preparation, from the rough hewn trunk to the finished vessel.

This new harbour is accessible only from the south through the passage between the Labyrinth Islands—a navigation far too difficult and dangerous to be used by vessels in distress during the south-west monsoon. On attempting to run parallel to the coast in steaming northward, the coral reefs, which are here very extensive, were found to be far too near the surface to admit of the passage of a vessel even of such light draught as the *Pluto*, the water shoaling suddenly from 8 to $1\frac{1}{2}$ fathoms. An attempt to stand to sea in the direction of the largest island outlying to the westward, the North Sentinel, failed from the same cause.

Port Campbell, which is likewise in South Andaman, was next visited. It was found to be an extremely fine harbour, with excellent anchorage, but at all times difficult of exit or entrance, from the direction and extreme narrowness of the deep-water channel at its mouth. We steamed round it and landed to examine the native villages near Montgomery Island at its mouth. The inhabitants steadily declined every advance, and we avoided actual collision with them. Wood, water, building-materials, and the essentials of a settlement, were abundant.

The Expedition, still steaming northward, then proceeded through Middle Strait, which separates Middle from South Andaman, to ascertain if possible the physical features of the interior of the island. The strait, in the greater part of its extent, was bounded by deep patches of stunted mangrove, the growth of that plant being evidently checked by the quantity of fresh water that falls into the strait during the monsoons. They would, if reclaimed, form rich rice lands, after the manner adopted in the island of Ramree, by bunding out the sea—an operation of no great physical difficulty where the rise and fall of the tide never exceeds 7 feet.

On leaving Middle Strait the coast was skirted, as near as it was safe to approach, to Port Andaman, which was steamed through. A large and easily accessible harbour is formed between the eastern canal of Interview Island and the adjoining western aspect of North and Middle Andaman. We steamed round Interview Island, and at its southern extremity, near South Reef Island, came into violent collision with the natives in an attempt made to open an amicable intercourse with them: one of them was captured and carried to Calcutta; of him more will be mentioned hereafter.

Interview Island lies parallel to and at a small distance from the main land. It is everywhere surrounded by a broad belt of man-

grove, except near its southern end, where the land is higher and more healthy-looking. It is covered with dense vegetation, and appeared to have an abundance of fresh water. In all its other characters it bears a strong resemblance to the other islands on the western shore, being little elevated, and bearing evident marks of exposure to the violence of the south-west monsoon. It is more thickly peopled than most parts of the western coast, but seems to share in the general deficiency of animal life.

An attempt to penetrate the Andaman Strait from the western extremity failed, the steamer having grounded on a rock at its mouth, from which it was extricated with much difficulty.

The remainder of the west coast was not minutely examined, as it was found not to contain any of the essentials for a convict settlement.

The Great Andaman is about 125 miles long, with a breadth varying from 10 to 16 miles. Its length runs north and south in the 93rd degree of east longitude, and between the 11th and 14th parallels of north latitude. Strictly speaking, the Great Andaman is formed by three islands, distinguished as North, Middle, and South. The two latter are separated by a strait, averaging a quarter of a mile in breadth, and extending for 12 miles north-west and south-east. It has a considerable depth of water throughout; but the eastern entrance, owing to the presence of a bar, has only, at low water, a depth of $1\frac{1}{2}$ fathoms. The two former are separated by a labyrinth of narrow canals, meandering through the swamps; but there is no distinct or practicable passage, of which the existence was indicated as probable by Lieut. Blair.

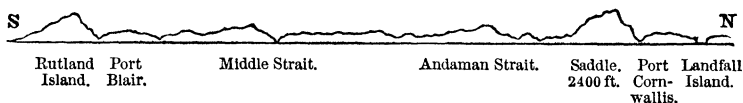
Viewing the Great Andaman as one island, a section of it from east to west would exhibit something of this form:—



The highest land, wherever seen, is on the eastern, and gradually descends towards the western shore. The water-shed is, therefore, chiefly towards the west, and consequently it is on that side of the island that marshy localities probably abound.

A section of the island from north to south shows the existence of several elevated ridges, which have all one characteristic in common: their highest point is towards the north, and they gradually decrease in height to the south, until they terminate either in low marsh-land, as at Andaman Strait, or in undulating ground of moderate elevation, as to the south of Port Cornwallis.

Rutland Island, which may be looked on as a continuation of the Great Andaman, has also its high mountain, which gradually sinks towards the south into a succession of low undulating hills.



To the north of Port Cornwallis the island is formed of a series of low hills, having the usual outline common to trap-formations. Immediately to the south from that port the land rises, until about 7 miles to the south it reaches its highest elevation in the Saddle Mountain, of which the height is about 2400 feet: it then gradually decreases for the next 14 miles, when the hills terminate, and there is some extent of land similar in character to the Sunderbunds, being low swamps covered with mangroves, and intersected by narrow canal-like passages, filled or half empty as the tide rises and falls.

A few miles farther south the land again attains a considerable elevation, which it retains for 18 miles, when it resumes a lower character; but the extent of this was not ascertained, as the coast opposite the Archipelago was not examined, for reasons mentioned above.

At the eastern entrance of Middle Strait hills are again prominent, become more so a few miles farther south, pass Port Blair, and end at Macpherson's Strait.

The geology of the island was not sufficiently investigated to warrant any detailed description. Specimens of rocks were collected at every locality at which a landing was effected, and were made over for arrangement and description to the Museum of Economic Geology in Calcutta. Extensive beds of silicious sandstone and limestone were discovered, which would prove valuable as building materials for any settlements that may be formed.

The hills are covered throughout the island, from their summits to their bases, with dense, luxuriant, and nearly impenetrable vegetation: among them were fine timber-trees and an abundance of bamboos, rattans, and thatching-palms. So far as we had the opportunities of examination, the general character of the botany of the island resembles that of Sumatra and of the Straits Settlements. The nutmeg and the pine-apple were found in a wild state. The poon, dammer, red-wood, ebony, cotton, and almond-trees were seen.*

* The nutmeg found in the wild state is not the aromatic nutmeg, but one of many species of no value. The pine-apple, a native of America, must have been introduced by the English settlers of 1790 or 1796. The cotton is not the gossypium, yielding the well-known textile material, but the silver-cotton or bombax, a tall forest-tree.

The only mammal seen by us was a small black wild hog, which has since been described by Mr. Blyth, and is believed by him to be a new species peculiar to the Andamans. Rats and monkeys are also said to exist there, but we did not meet with any of them. A harmless green snake was the only reptile we fell in with: centipedes and scorpions abounded. Birds were not numerous: pigeons, crows, kingfishers, curlews, fish-hawks, gulls were shot by us in different parts of the island; but the feathered tribe were by no means so numerous or varied as on either of the adjacent continents.

The general chart of the Andamans, prepared by Lieut. Archibald Blair, was supplied in manuscript by the Surveyor-General's office of Calcutta for the use of the Expedition. It was employed throughout, and found to be an accurate, safe, and certain guide to all those parts of the islands which had been examined by him in detail. In those spots where his survey had been less minute it was found to be defective; but wherever it proved to be so, the localities were of such a nature as to be of no practical use, either in themselves, or from being beset with dangers which render them so. But all those places which had been attentively surveyed and were represented in minute detail on the chart, such as Old and New Port Cornwallis, Rutland Island, Port Campbell, &c., were found to be in exactly the same condition as when delineated by Blair 70 years ago. This was particularly observable in Middle Strait, where islets of only 50 yards in length appear in precisely the same state as to size, elevation, and position, as that represented by the first surveyor. The very vegetation upon them gave the idea of its being the growth of the last monsoon; the only signs of age being the dead stems and decayed branches of trees standing among the low mangroves, stunted from want of the free access of the waters of the ocean.

The permanency of the features of this passage is doubtless attributable in the first place to the hard sandstone formation prevalent in its vicinity, and which forms the foundation of these islets, as well as of the points which govern the windings of the strait. Further, the tides are so weak as to carry no silt with them, and the drainage is merely that of the adjacent hills, which would amount in the aggregate to 50 square miles, and this, being distributed through the entire length of the strait, is far too small to affect it.

The whole of the shores of the Andamans are skirted by continuous coral reefs. Coral abounds in every bay, and is strewn in broken pieces on every beach. These reefs are far more extensive and form dangers to a much greater distance from the land on the west side than on the east, depths of 100 fathoms being found in many places on the eastern shore within 3 miles of the coast, and

generally at a distance of 5 miles ; whereas on the western shore the reefs form dangerous patches at a distance of 20 and 25 miles from the land—a fact the probability of which is sufficiently indicated by the geological features of the islands, the general dip of the stratified rocks being to the eastward and at a high angle, sometimes as much as 75° .

We were unable to make any observations on the growth of the coral, our chart being on too small a scale, and the chief objects of the Expedition not permitting of our devoting any special time and attention to it. Navigation among coral must at all times be hazardous, and the most minute survey may fail to detail some of the isolated rocks, of the approach to which no warning is discoverable. The banks which exist so far to the westward must always prove impediments to the prosperity of a colony established at Interview Island, or on any part of the western coast.

All accounts concur in representing the inhabitants of the Andaman Islands as extremely savage, uncivilized, hostile to strangers, inhospitable, and steeped in the lowest depths of barbarism. From the time in which the first mention of their existence is found to the present moment they have consistently maintained the same character. All our attempts to hold amicable intercourse with them failed utterly, and in most instances ended in hostile collision, the initiative being invariably on their part—on ours hostility was strictly confined to self-defence and the repulsion of their unprovoked attacks. It is impossible to imagine any human beings to be lower in the scale of civilization than are the Andaman savages. Entirely destitute of clothing, utterly ignorant of agriculture, living in the rudest and most simple habitations, their only care seems to be the supply of their daily food. The little that is known of their manners and customs proves them to be without religion or government, and that they live in perpetual dread of the contact of any other race. Of the large number of convicts who have escaped from the new settlement, in the hope of finding an asylum with the savages, with a very few exceptions, all who survived hunger and exposure were murdered by the aborigines with the most determined ferocity. The few who were spared and have returned to the settlement have been unable to assign any reason for their own safety.

From time immemorial they have been reputed to be cannibals. We examined every hut and village visited by us for proofs of the existence of such a practice in vain. The question may now be considered to have been set at rest by the testimony of a Brahmin sepoy of the 14th Bengal Native Infantry, named Doodnath Fewarny. This individual was a convict mutineer, who escaped from Port Blair on the 23rd of April, 1858, and returned voluntarily to the settlement on the 17th of May, 1859, after a residence

of a year and 24 days among the aborigines of the Great Andaman. In his deposition, taken by Dr. J. P. Walker, the first superintendent of Port Blair, he distinctly stated that "the aborigines are undoubtedly an uncivilized people, but they most certainly are not cannibals in any way, for they neither devour human bodies in any form, nor do they eat uncooked animal food in any form. They are a wild people, most savagely inclined to strangers generally, but most kindly disposed in their conduct to each other."

Of their social habits all that was previously known was conjectural, and was so mixed up with fable and fiction as to be undeserving of belief. Doodnath Fewarny, and another convict who likewise lived for some time among them, have communicated important, and in the main probably correct, information regarding these and many other particulars respecting this singular race. Much of what follows is on the authority of the individuals above mentioned.

The Great Andaman is apparently inhabited by a single tribe speaking the same language, having the same manners and customs, and possessing a similar identity of physical characters. The entire population is migratory, rarely residing in one spot for many days. They are divided into groups or parties of from 10 to 300 each, generally, however, not exceeding from 30 to 50, including all ages and both sexes: their number has heretofore been estimated at from 3000 to 10,000. The Brahmin sepoy believes that, in the finest part of the island which had been visited by him, he must have seen at least 15,000 men, women, and children on the southern and western coasts: there is an encampment every 4 or 5 miles. The proportion of children to adults and of males to females is stated by the same observer to be about the same as in Hindustan. He saw no indications of the practice of infanticide; children of all ages were alike treated with kindness and care. The rate of mortality, judging from that of Hindustan, was not high. The births were believed to exceed the deaths, and the population to be, consequently, on the increase. They generally inhabit the jungle adjoining the seacoast, from the facilities which there exist for procuring an abundant supply of shell and other fish, and of fresh water. Villages are also formed on the shores of tidal creeks; but in the interior itself no clearings or habitations exist. Parties visit the interior to hunt pigs and collect fruits, but return to the coast at sunset, except when travelling from one place to another. Their habitations are open huts, composed of roofs thatched with palm-leaves, raised on four posts, of which those in front are usually higher than those in the rear. In every large village or encampment was one hut in the centre, built and thatched with considerable care and skill, square in form, and containing a large

number of pig and turtle skulls, bows, arrows, shields, and domestic articles. The floors of the huts are free from vegetation, and the ground in and immediately adjoining the villages is also carefully cleared of all jungle. The foot-paths, every one of which was carefully traced, were found to lead to rills of fresh water: in no instance did they lead to more extended inland means of communication. The group of huts varied from 3 or 4 to as many as 22 in number. In the interior of the huts were found bundles of pig and turtle skulls, and sometimes a considerable collection of fish-bones.

They have no idea of a Supreme Being, and perform no ceremonies to indicate the existence of any form of religion. The account of their religious ceremonies given by Colonel Syme is not confirmed by any of the persons who have dwelt among them.

The girls attain the age of puberty between 12 and 14 years, subsequent to which the intercourse of the sexes is of the nature related by Herodotus in regard to the Massagetæ. The wives are said to be faithful to their husbands, and the widows do not re-marry, remaining virtuous—being the only exceptions to the utter absence of all moral feeling among them.

Their marriage ceremony would appear to be of the most simple nature. The seniors of the parties determined the matter without consulting those more immediately concerned, who were sent for and married, without exciting attention or curiosity. In five weddings witnessed by Doodnath Fewarny the proceeding was the same. The bride, having painted her body in stripes and covered her fingers with red earth moistened with turtle-oil, sits on leaves spread on the ground as a carpet; the bridegroom, similarly decorated, squats on his leafy bed at a distance of 10 or 12 paces. They thus sit in silence for about an hour, after which the person who is to unite them comes from his hut, takes the bridegroom by the hand, leads him to the bride, and having seated him, without saying a single word, presents him with five or six iron-headed arrows, and then leaves him. They remain in silence by each other until nightfall; and this is all the ceremonial observed.

The women rarely accompany the men in their hunting or fishing excursions—the supply of water, cooking of food, making of nets and baskets, and care of the children, with similar household occupations, falling to their lot. They remove the hair from the heads and bodies of the men and of one another by means of small chips of brittle glass, prepared with considerable skill and ingenuity: they also tattoo the bodies of both sexes by small incisions in regular lines, the whole body being thus marked, with the exception of the head, neck, lower part of the abdomen, and hands and feet. The operation is performed between the ages of eight and ten, and during the first four months of the year, when fruit is abundant

and fishing less frequent. A limb or part of a limb is tattooed in a month, the entire completion of the operation occupying from two to three years, at the season above mentioned. As soon as the incisions are completed, the bleeding limb is smeared over with a white earth, supposed to be lime. The wounds, after free suppuration, heal in two or three weeks, no colouring matter being used to render the marks more indelible. The little of medicine or surgery practised by them is also performed by the women: it seems to be confined to local blood-letting by scarification, and to the application of a paste of red earth and turtle-oil.

On the march the women carry the young children in a sling made of bark, suspended from the neck, with the legs of the children passing over the loins and hips of the mother. They also carry the empty water-vessels—hollow bamboos with the septa removed—with spare or uncooked provisions, pluck the green leaves that form their bedding, and build as well as thatch any huts that may be needed.

The process of parturition takes place in public, the pregnant woman usually attending to her ordinary avocations until labour begins. The umbilical cord is cut with a knife, but no ligature is applied to it. The woman after confinement receives no special treatment, eating and drinking as usual, and moving about a few hours after delivery. The child on being born is immediately washed in cold fresh water, poured from a bamboo, and its body is dried by the hand heated before a fire, quickly and repeatedly, but very gently, applied. Any mother who is nursing at the time suckles the new-born infant until its own mother is able to do so; the child is only weaned when the maternal supply of food ceases. During the first days of its existence the infant is covered with a few leaves sewn together: this covering is called “kassa.”

Children are kindly treated by their parents, who are respected and obeyed by them as in more advanced states of civilization. They play among themselves, as in Hindustan; the boys at three years of age being furnished with miniature bows and arrows: at eight the latter accompany their fathers in hunting and fishing.

Doodnath Fewarny has also, for the first time, made us acquainted with the manner of disposing of the dead, adopted by the natives of the Andamans. As soon as death occurs, the corpse is removed from the interior of the hut to the outside, where it remains until burial, a few hours afterwards. If the death takes place at even-tide, it is buried on the following morning—the other members of the family sleeping by the deceased, as if nothing unusual had happened. The dead seem to be sincerely mourned by their surviving relatives. The corpse is buried without any special preparation by washing, shaving, or painting: it is tied into as small a bundle as it can be made to occupy by flexing the limbs on the

trunk—a process of some difficulty when sepulture is deferred until cadaveric rigidity has supervened. It is carried to the grave by a near relative of the deceased and placed in an irregular round hole, about 3 feet in depth, over which a small mound of earth is raised to mark the spot. The whole village turns out to see the body removed, but only two or three accompany it to the burial-place, which is usually a mile inland.

Two or three months after sepulture, when the flesh has been decomposed and destroyed, some of the near relatives of the deceased dig up the bones, tie them together, and carry them to the neighbouring village: there they are spread out for the inspection of the relatives, who weep over them, each pressing a bone to the breast with one hand, while the weeping eyes are shaded by the other. The nearest of kin, male or female, takes possession of the skull and lower jaw, which is for months, probably for years, worn on the back, suspended by a loose cord from the neck. The practice is so general, that from 8 to 10 per cent. of the adult population wear skulls thus suspended when unemployed: when hunting or fishing, the men leave them in charge of the women at the encampment. The other bones are taken away by the relatives, but their ultimate disposal is as yet unknown. In our frequent examinations of huts and villages we failed to find a single human bone, or to discover any of the burial-places mentioned by Doodnath Fewarny.

From the intense blackness of their skins and their low stature, the inhabitants of the Andamans have heretofore been ranked by ethnologists as negrilloes, or negritoës, to possess a near relation to the Papuan tribes, and to exhibit more of the attributes of an African than of an Asiatic race. From a paper read by Professor Owen, at the recent meeting of the British Association at Manchester, this would seem to be an error. A careful examination of the bones of an adult male, which I placed in his hands, and for which I was myself indebted to Dr. J. P. Walker, led the eminent comparative anatomist above mentioned to regard them as an aboriginal race, with marked differences from the African and Asiatic types—the blackness of their tegumentary pigment being assigned to constant exposure. They were said to differ still more from the Papuan Australian type than from the West-coast negro, and to afford no indications of a Malagan or Mongolian origin. Their supposed affinity, from the structure of their language, to the Burmese of the opposite continent, was likewise shown to be fallacious.

The individual captured by us at Interview Island, and carried to Calcutta, was a full-grown well-formed adult, whose age we conjectured to be about 25 years: he was 4 feet 9½ inches in height. The skeleton examined by Professor Owen was that of an

adult male, 5 feet 10 inches in height, who was shot in one of the attacks made by the natives on the convict settlement. The other natives killed in our involuntary encounters were about 5 feet in height, well-shaped, robust and healthy. None of their bodies were removed by us, lest the aborigines should misunderstand the object of our mission, it having been deemed desirable in the interests of the future settlements to conciliate them by every possible means.

The natives of the Andamans, although diminutive in stature, are extremely robust and vigorous—run, climb, and swim with great swiftness and power, possess unusually acute senses, and are a brave, warlike race. Although hostile to outsiders, they are gentle and amiable in their intercourse with each other. They possess high imitative faculties, and when once captured are singularly free from all trace of ferocity. This was the case in the example referred to above, and has been noticed in regard to those who have been taken more recently, and are now at Moulmein, to be trained and educated to become, if possible, the future medium of communication with their fellow-countrymen. Both sexes and all ages are completely naked, without the smallest sense of shame. They remove the hair from the whole body, leaving only the eyelashes untouched. The hair of the man taken to Calcutta was allowed to grow, and, so far as the observation extended, exactly resembled that of the Papuan race.

The men cover the whole body with a coating of mud or clay to protect them from the attacks of insects, which are numerous and troublesome: they also rub a red earth on the top of the head, probably for the purpose of ornamentation. They wear around the waist a cord of tough vegetable fibre, to which a sharp knife-blade, made by hammering out a large nail, is attached. The use of this seems to be to open shell-fish.

Their weapons are bows and arrows—the former extremely tough and of various shapes; the latter usually 4 feet in length, and either barbed with iron or with hardened wooden points. Many of them consist of two parts, united by a twisted cord, and are evidently used for fishing. None of the arrows found by us, or by which any of our party were wounded, were poisoned. One of our wounded suffered from tetanus, the result of the laceration among the deep muscles of the back. The most serious wound was that sustained by Lieut. Heathcote; but it was followed by no other bad effect than that of the injury itself. A few of the aborigines were armed with spears with light metallic heads; but none of them were obtained.

Their canoes are formed from the trunks of trees, carefully selected and seasoned, and scooped out by means of an adze, con-

sisting of a wooden handle with a sharpened metal blade. In Blair's time they are stated to have been excavated by the agency of fire. Some of them had strong outriggers for open sea navigation, and occasionally lights were seen 3 or 4 miles from the coast at night, which were conjectured to have been given out by the resinous torches, which were found in every canoe.

Hand-nets, and large nets with stone weights, were found in nearly every village, and in most of the canoes. The former were extremely well made; the latter were strong, and apparently designed for the capture of turtle.

Their drinking vessels were either the shell of the nautilus or joints of the bamboo. Some of the latter are stated by Doodnath Fewarny to have been several feet in length, with the inner partitions removed, and to be capable of containing five or six gallons of water.

All that is yet known of their language is contained in the brief vocabulary published by Colebrooke. It possesses no analogy to any known living tongue, and was not understood by the savage taken to Calcutta. This individual sickened so suddenly and unexpectedly, that no vocabulary could be obtained from him. The opportunity now afforded, by the detention of three other members of the same race at Moulmein, of obtaining a more perfect record than has heretofore been possible, will doubtless not be lost sight of.

The Andamans are now the penal settlement for all convicts transported from India, and very recently they have been opened to colonization, under certain restrictions. The entire absence of free labour, the extreme difficulty of clearing away the primeval forest, and the aggressive character of the aborigines, will prevent the latter privilege from being taken advantage of for some time to come. Yet the extreme fertility of the soil, the mild quality of the climate, and the advantageous position of the islands, will in time render them as valuable as some of the Straits settlements are at present.

At all events, the standing reproach of so great a scandal to humanity in the track of the commerce of one of the greatest and most frequented highways of the world has been permanently removed, and the reclaiming of its wretched population from their present misery and degradation is brought within the reach of the Christian and the philanthropist.
